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## A Modern Analytical Framework for Monopolization in Innovative Markets for Products with Network Effects

John McGaraghan

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# A Modern Analytical Framework for Monopolization in Innovative Markets for Products with Network Effects

*by*  
JOHN MCGARAGHAN\*

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*You'd better start swimming or you'll sink like a stone.*

*-Bob Dylan*

## I. Introduction

In the most recent of three landmark antitrust cases against software giant Microsoft, *United States v. Microsoft Corp.* (“*Microsoft III*”),<sup>1</sup> Microsoft argued that the nature of its “new economy” industry mandated that courts adopt a different view of the monopolization charges the company faced.<sup>2</sup> The approach Microsoft advocated attempted to inject a sensitivity to the needs of dynamic industries that operate in a different competitive landscape than the kinds of brick-and-mortar markets the law has been developed over time to serve.<sup>3</sup> The court refused to consider the proposed paradigm shift and instead relied on traditional, old economy antitrust principles. In doing so, the court passed up an opportunity to usher existing antitrust law into the twentieth century, and failed to protect the needs of producers and consumers in the new millennium.

When a court analyzes a Sherman Act monopolization charge<sup>4</sup> it looks at a company’s market power horizontally across a group of providers in a single “relevant product market.”<sup>5</sup> The relevant product market has traditionally been defined by identifying products that are “reasonably interchangeable [with defendant’s product] by consumers.”<sup>6</sup> Microsoft argued that competition in the software

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1. *United States v. Microsoft Corp.*, 253 F.3d 34, 48 (D.C. Cir. 2001). Microsoft appealed antitrust claims including monopolization, attempted monopolization, and tying, with respect to its Windows operating system and Internet Explorer internet browser software.

2. *Id.* at 49-51 (arguing that the rapid evolutionary nature of the software and network technology market is inherently different than traditional product markets, requiring a modified analysis of the monopolization claim).

3. *Id.*

4. 15 U.S.C. § 1, *et seq.* (2000). The Sherman Act prohibits unreasonable restraints on trade, including combinations (horizontal or vertical agreements such as price fixing or market division), and monopolization. The later adopted Clayton Act, which adds several substantive prohibitions, as well as remedial provisions, is discussed *infra*.

5. *United States v. Aluminum Co. of Am.* (“*Alcoa*”), 148 F.2d 416, 422-32 (2d Cir. 1945) (engaging in an analysis of the market in which Alcoa operated for purposes of determining monopolization liability). While the term “relevant product market” was not adopted by courts until later (*see United States v. Grinnell Corp.*, 384 U.S. 563, 585 (1966) (Harlan, J., dissenting)), Alcoa introduced the conceptual framework.

6. *United States v. E.I. du Pont de Nemours & Co.* (“*du Pont*”), 351 U.S. 377, 395 (1956).

industry is unique, demanding a different approach to several aspects of monopolization analysis.<sup>7</sup> The argument posits that in quickly evolving markets, firms compete “for the field,” vying for the next innovative idea that will supplant the previous technology and become the new industry standard.<sup>8</sup> Microsoft further argued that the existence of “network effects” of many software and technology products provides a greater benefit to the public when provided by a single dominant firm’s solution.<sup>9</sup> It asserted that network products provide far greater value to consumers (in the form of efficiency and predictability) when they promote interoperability.<sup>10</sup>

The court rejected these arguments,<sup>11</sup> and this article explores the merits of their consideration in analyzing monopolization claims. There are several significant reasons that the suggested change was, and is, worthy of consideration. First, the court’s outright rejection of Microsoft’s sophisticated analytical framework rooted in economic theory is an anomaly, taken in light of over a century of active judicial evolution of antitrust standards and principles.<sup>12</sup> Second, the court chose to disregard Microsoft’s claims that the public would be adversely impacted if courts did not recognize the increasing importance of so-called “network effects” that characterize much of the current field of high technology products and services.<sup>13</sup> Finally, the court’s decision ignores the fact that analysis of antitrust problems in new economy markets under the traditional framework will

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7. *Microsoft III*, 253 F.3d at 50, 51 (arguing that network effects of operating system software mitigate the harm of Microsoft’s monopoly position, and that the rapid change in the software industry requires direct proof of market power, rather than a presumption based on market share).

8. Lucian Arye Bebchuk & Assaf Hamdani, *Vigorous Race or Leisurely Walk: Reconsidering the Competition Over Corporate Charters*, 112 YALE L.J. 553, 587 (2002) (“Competition in markets with substantial network effects is usually for the dominant market position - i.e., competition is ‘for the field’ rather than ‘within the field.’”).

9. *Microsoft III*, 253 F.3d at 49-50.

10. Steven C. Salop & R. Craig Romaine, *Preserving Monopoly: Economic Analysis, Legal Standards, and Microsoft*, 7 GEO. MASON L. REV. 617, 621 (1999) (describing the benefit of “compatibility and interoperability” underlying this particular network effect in software markets as its potential to create a ‘positive feedback loop’”).

11. *Microsoft III*, 253 F.3d at 57 (stating that “Microsoft cites no case, nor are we aware of one, requiring direct evidence to show monopoly power in any market”).

12. *Id.*

13. *Id.* at 50 (asserting that “[w]hether or not Microsoft’s characterization of the [network effects in the] operating system market is correct does not appreciably alter our mission in assessing the alleged antitrust violations in the present case”).

provide limited utility and tend to render many such antitrust decisions and remedies obsolete long before they are issued.<sup>14</sup>

While recognizing the challenges that implementing these proposed changes would present the courts,<sup>15</sup> this article presents a basic framework by which they could be implemented. The accommodations suggested herein are not intended as a definitive solution. Rather, they illustrate the potential for enhancing the power of the antitrust laws by integrating this new body of doctrine with existing principles. First, this article offers a modified definition of the relevant product market. Second, it proposes an updated analysis of a firm's power in an innovative market. Finally, the article addresses ways to integrate innovation and network effects concepts into analyses of monopolization conduct. Antitrust laws can more adequately serve the needs of both the innovative industry players and the consumers who rely on the products they produce through recognition and integration of these principles at all three phases of a monopolization prosecution.<sup>16</sup>

## II. Background

### A. Sherman Act: Market Power and Monopolization Conduct

Section 2 of the Sherman Act makes it a felony to "monopolize any part of trade or commerce."<sup>17</sup> Since the inception of the Act, courts have interpreted this language to require two elements: power in the relevant market,<sup>18</sup> and a conduct element that requires some type of criminal, illegal, or otherwise illicit behavior designed to

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14. *Id.* at 49 (refusing to deviate from established analysis despite acknowledging that "just over six years have passed since Microsoft engaged in the first conduct plaintiffs allege to be anticompetitive. As the record in this case indicates, six years seems like an eternity in the computer industry. By the time a court can assess liability, firms, products, and the marketplace are likely to have changed dramatically."). Indeed, during the six years between Microsoft's conduct and the judgment, the nature of the competition in the market (including the prominence of middleware competitors Java and Netscape), had changed dramatically. A firm harmed by anticompetitive behavior in an innovative market may have missed its opportunity in that market, and cannot be made whole by injunctive relief or money damages.

15. See Challenges to Meet and Pitfalls to Avoid, *infra* Section IV.D.

16. See Richard Schmalensee, *Antitrust Issues in Schumpeterian Industries*, 90 AM. ECON. REV. PAPERS AND PROC. 192, 193 (2000) (arguing just prior to the Microsoft III decision that "traditional tests for monopoly power" fail to adequately address the rapid change of market structure and power in the software industry).

17. 15 U.S.C. § 2 (2000).

18. *United States v. E.I. du Pont de Nemours & Co. ("du Pont")*, 351 U.S. 377, 391 (1956) (defining market power as "the power to control prices or exclude competition").

achieve or maintain monopoly power.<sup>19</sup> It is well established that market power, or the ability to control pricing above the competitive level by regulating output in the market for a particular product or service,<sup>20</sup> “ordinarily may be inferred from [a firm’s] predominant share of the market.”<sup>21</sup> Modern plaintiffs can conclusively establish the market power element of their claims indirectly by showing that the defendant holds at least an 80 percent market share in the relevant market.<sup>22</sup>

Courts have routinely relied on economic theory to inform their active evolution of standards for application of the antitrust laws,<sup>23</sup> and legal scholarship has consistently pushed for adoption of more sophisticated economic analysis.<sup>24</sup> In pursuit of its goal to benefit the public, it has been the practice of the judiciary to look to economics to determine the most appropriate targets for liability and the most effective remedies.<sup>25</sup> In this way, courts are able to refine their

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19. *United States v. Grinnell Corp.*, 384 U.S. 563, 571 (1966).

20. *See Ball Mem’l Hosp., Inc. v. Mut. Hosp. Ins., Inc.*, 784 F.2d 1325, 1335 (7th Cir. 1986).

21. *Grinnell*, 384 U.S. at 571.

22. *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 504 U.S. 451, 481 (1992); *see also du Pont*, 351 U.S. at 379-80 (finding that du Pont was “dominating” the market with 75% market share).

23. *See, e.g., United States v. Aluminum Co. of Am. (“Alcoa”)*, 148 F.2d 416 (2d Cir. 1945) (identifying market power and monopolization conduct elements, and engaging in market definition to determine market power, forever changing monopolization law); *see also Berkey Photo, Inc. v. Eastman Kodak Co.*, 444 U.S. 1093 (1980) (holding that leverage from market power in one product to effect sales in a related product can be monopolization conduct); *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985) (holding that individually disadvantageous behavior in the economic short run was likely to constitute monopolization conduct); *Cont’l T.V., Inc. v. GTE Sylvania*, 433 U.S. 36 (1977) (holding that vertical, non-price restraints should not be illegal per se under section 1 of the Sherman Act because the adverse effects of intrabrand competition promoted interbrand competition); *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 590 (1986) (analyzing conduct based on its impact on the market in the “short run,” or the period over which competitors cannot effect a change in output to respond to a market shift in demand).

24. *See, e.g., Henry N. Butler & Barry D. Baysinger, Vertical Restraints of Trade as Contractual Integration: A Synthesis of Relational Contracting Theory, Transaction-Cost Economics, and Organization Theory*, 32 EMORY L.J. 1009, 1013 (1983) (arguing that transaction cost economics and decision/organization theory can provide valuable frameworks to inform policy decision regarding the implementation of the Antitrust laws).

25. *See Phillip Areeda & Donald F. Turner, Predatory Pricing and Related Practices Under Section 2 of the Sherman Act*, 88 HARV. L. REV. 697, 699 (1975) (arguing for a detailed economic analysis of why challenged conduct *does not* tend to threaten the operation of markets in evaluation of monopolization claims).

approach to provide fine grained analysis of complex economic systems.<sup>26</sup>

In that spirit, courts have adapted standards to impute liability and to provide remedies consistent with the tenets of prominent economic theories.<sup>27</sup> In the most recent term, the United States Supreme Court overturned a ninety-six year old per se prohibition on vertical minimum price fixing in favor of analyzing such restraints under the rule of reason.<sup>28</sup> The Court noted that vertical price restraints reduced *intra*brand competition, but promoted *inter*brand competition in the same way that vertical non-price restrictions did.<sup>29</sup> The Court adopted analysis from legal and economic scholarship tending to show that such a rule can decrease free-riding, create high-price, high-service brands, and provide consumers with reliable information about high quality options.<sup>30</sup> Courts continue to adopt increasingly astute and informed formulations of tests, and to artfully devise remedies when liability is found.<sup>31</sup> It seems anachronistic that the *Microsoft III* court would refuse to at least attempt a detailed review of the merits of an argument that hinges on a discrete economic concept directly applicable to the market in question.<sup>32</sup>

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26. *Id.* But see Ronald A. Cass & Keith N. Hylton, *Preserving Competition: Economic Analysis, Legal Standards and Microsoft*, 8 GEO. MASON L. REV. 1, 5 (1999) (criticizing the “nip-and-tuck” approach, and arguing that the Antitrust laws are better suited to being applied as a blunt instrument, the authors introduce their article with the premise that “Antitrust law is a hammer, not a scalpel”).

27. Michael Heise, *Brown v. Board of Education, Footnote 11, and Multidisciplinarity*, 90 CORNELL L. REV. 279, 308 (2005) (noting that “[m]odern antitrust doctrine’s incorporation of economics is manifest and . . . today the debate is not whether economic theory shapes antitrust doctrine, but rather which variant of economic theory is in favor”).

28. *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 127 S.Ct. 2705 (2007) (overturning *Dr. Miles Med. Co. v. John D. Park & Sons Co.*, 220 U.S. 373 (1911) despite a strong *stare decisis* challenge, in light of the advanced economic analysis of the potential procompetitive effects of such restrictions).

29. *Id.* at 2715 (citing *Cont’l T.V., Inc. v. GTE Sylvania*, 433 U.S. 36, 54-57 (1977); *State Oil Co. v. Khan*, 522 U.S. 3, 15 (1997)).

30. *Id.* at 2715-16 (citing Richard A. Posner, *Antitrust Law: An Economic Perspective*, 172-73 (2d ed. 2001) (1976); Howard P. Marvel & Stephen McCafferty, *Resale Price Maintenance and Quality Certification*, 15 RAND J. ECON. 346, 347-49 (1984)).

31. See Areeda & Turner, *supra* note 25; see also, *Leegin*, 127 S.Ct. at 2710 (holding vertical minimum price restraints should be evaluated under the rule of reason because of their procompetitive potential to stimulate interbrand competition through intra-brand restrictions by creating a market for high-price, high-service options while decreasing free-riding).

32. See Howard A. Shelanski & J. Gregory Sidak, *Antitrust Divestiture in Network Industries*, 68 U. CHI. L. REV. 1, 6-7 (2001) (asserting that “[t]he issue is particularly complex because, in network industries characterized by rapid innovation, both forces

## B. Competition for the Field: The Essence of the Argument

In defining a firm's market power, it necessarily follows that the fewer competitors the court identifies in the relevant market, the greater the defendant firm's market share will be.<sup>33</sup> Since a large market share creates a presumption of market power, defendant firms generally seek to expand the field that the court considers to be its competitors.<sup>34</sup> Typically, defendants argue that products not previously considered by courts to be competitors could qualify as effective substitutes for defendants product.<sup>35</sup>

In the *Microsoft III* case, Microsoft also argued that the rapid pace of innovation demanded a completely different understanding of the nature of competition in the software market, and therefore a different understanding of its landscape of competitors.<sup>36</sup> Rather than competing for a share of the market for an existing product, Microsoft argued that innovators compete to release the *next* innovative product.<sup>37</sup> By creating an entirely new product that renders a current product obsolete, an innovator has the opportunity to capture nearly all of the old product's users, and achieve a significant market share of the new product while the usership of the old product plummets. The new product is not a substitute for the old product, but rather a replacement for it.

According to this view competition takes place "for the field" rather than in it.<sup>38</sup> Competition for the field is fierce, and fast paced.<sup>39</sup>

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may be operating and can be difficult to isolate"). In recommending that courts should engage in such an inquiry, the author does not suggest that such an enterprise would be without its challenges.

33. Simple arithmetic shows that if one firm's volume of business remains numerically constant, its proportional share of the market will change as the definition of what constitutes the entire market expands or contracts. For example, if defendant and two other firms each have a sales volume of 1, defendant's market share would be 33 percent if all firms are considered, or 50 percent if only one of the two competitors is included. As a result, a monopolization defendant argues for a broader definition of the relevant market to decrease its own share of the total, thereby limiting the presumption of market power.

34. See, e.g., *United States v. Aluminum Co. of Am.* ("Alcoa"), 148 F.2d 416, 423 (2d Cir. 1945) (arguing that providers of recycled, or "secondary" ingot were competitors in the general aluminum market).

35. *Id.* (dismissing Alcoa's argument secondary ingot was a valid substitute for virgin because secondary was of lesser quality, and manufacturers of many products, such as wire and aviation parts, insisted on using virgin).

36. *United States v. Microsoft Corp.*, 253 F.3d 34, 50-51 (D.C. Cir. 2001).

37. Salop & Romaine, *supra* note 10, at 623 (noting, *inter alia*, that "[i]nnovation is an important dimension of competition in these markets").

38. Bebachuk & Hamdani, *supra* note 8, at 587 ("[C]ompetition is 'for the field' rather than 'within the field.' The early leader, offering the largest network benefits, will



It requires that firms think several product cycles ahead to ensure that they are staying on the forefront of innovation and to anticipate the rapid change in consumer demand that is fomented by advances in related technologies.<sup>40</sup> As a pointed example, early pioneers in e-commerce, such as Amazon.com, Netflix, and iTunes, were able to create significant market shares by anticipating the growth in online shopping enabled by advances in broadband internet service and the demand for so-called “long tail” content that proliferation of broadband networks made possible.<sup>41</sup>

### III. Analysis

#### A. Innovation: The Case for Change

It has been sixty-five years since Joseph Schumpeter introduced his theory of “creative destruction,” wherein innovation stimulates long term economic growth by “revolutioniz[ing] economic structure from within.”<sup>42</sup> Despite compelling economic and legal scholarship on the Schumpeterian philosophy and its application to antitrust analysis, courts have yet to embrace and apply this theory in their Sherman Act jurisprudence.<sup>43</sup> The unique landscape that is the rapidly evolving technology market is not well served by rigid, old-economy approaches to antitrust analysis because it assumes that innovation cannot effect competition in the short run.<sup>44</sup> As a result, the consuming public—the group the antitrust laws are designed to

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successfully attract additional consumers and have good chances of dominating the market.”).

39. See generally MICHEL ROBERT, *PRODUCT INNOVATION STRATEGY PURE & SIMPLE: HOW WINNING COMPANIES OUTPACE THEIR COMPETITORS* (McGraw Hill, Inc. 1995).

40. *Id.*

41. CHRIS ANDERSON, *THE LONG TAIL: WHY THE FUTURE OF BUSINESS IS SELLING LESS OF MORE* 6-13 (2006) (arguing that the traditional “80/20” rule, which dictates that 80 percent of sales are made on 20 percent of available products does not apply where consumers have access to all products and “shelf space” is not an issue, as in the online retail industry. Instead, significant profits can be made by business that innovates ways to capture niche markets, making low volume sales on each of the massive collection of less popular products that represent the “long tail” of the products/sales demand curve).

42. JOSEPH A. SCHUMPETER, *CAPITALISM, SOCIALISM AND DEMOCRACY* 81-86 (Harper & Row Publishers, Inc. 1976) (1942).

43. See, e.g., Shelanski & Sidak, *supra* note 32. See also Schmalensee, *supra* note 16, at 193 (arguing that “traditional tests for monopoly power” fail to adequately address the rapid change of market structure and power in the software industry).

44. Schmalensee, *supra* note 16, at 193.

protect—may be deprived of the full benefit that such a market has to offer.<sup>45</sup>

If Schumpeter's ideas were highly applicable to the economy he knew, they are even more apropos today.<sup>46</sup> In the past decade, the nature of innovation has changed dramatically.<sup>47</sup> Schumpeter could not have imagined the pace, impact, and grass roots nature of modern innovation that has enabled an eighteen year old college freshman to revolutionize network computing by developing peer-to-peer file sharing software in his spare time;<sup>48</sup> a pair of twenty-three year old graduate students to instantly change the way the world retrieved information by indexing the Internet more effectively;<sup>49</sup> a twenty-one year old software developer exploring a "hobby" to change the operating system market and open source movement by releasing Linux;<sup>50</sup> and a thirty-one year old M.I.T. Ph.D. dropout to publish the GNU Manifesto, giving birth to the open source software movement, responsible for untold innovation and economic value.<sup>51</sup> Given that the pace of innovation has increased exponentially and that revolutionary ideas can come from unlikely places and change the world almost overnight, it is a hyperbolic oversimplification to assert that a technology firm's long term market power is wholly unrelated to nascent, incipient, or even unanticipated innovation.<sup>52</sup>

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45. See Salop & Romaine, *supra* note 10, at 634-45.

46. Shelanski & Sidak, *supra* note 32, at 11 ("Though he died decades before the advent of personal computing, Schumpeter saw such rivalry as 'the essential fact about capitalism'" (quoting SCHUMPETER, *supra* note 42, at 83).

47. See, e.g., Moore's Law – Wikipedia [http://en.wikipedia.org/wiki/Moore's\\_law](http://en.wikipedia.org/wiki/Moore's_law) (exemplary of an axiomatic principle in the technology industry that with each individual technological advance, the potential for further advancement doubles, and manufacturing approaches "minimum cost").

48. Timothy James Ryan, Note, *Infringement.com: RIAA v. Napster and the War Against Online Music Piracy*, 44 ARIZ. L. REV. 495, 497 (2002) (noting that Fanning "beg[an] a revolution that would pit music aficionados against the very establishment that gave them their beloved artform in the first place"); See also Shawn Fanning – Biography, Wikipedia [http://en.wikipedia.org/wiki/Shawn\\_Fanning](http://en.wikipedia.org/wiki/Shawn_Fanning)

49. Bryan H. Choi, Note, *The Grokster Dead-End*, 19 HARV. J. L. & TECH. 393, 395 n.13 (citing Google – Wikipedia, <http://en.wikipedia.org/wiki/Google#History>).

50. See generally Douglas A. Hass, *A Gentlemen's Agreement Assessing the Gnu General Public License and Its Adaptation to Linux*, 6 CHI.-KENT J. INTELL. PROP. 213 (2007); See also Linus Torvalds – Biography, Wikipedia, [http://en.wikipedia.org/wiki/Linus\\_Torvalds](http://en.wikipedia.org/wiki/Linus_Torvalds).

51. See generally Hass, *supra* note 50. See also Richard Stallman – Biography, Wikipedia, <http://en.wikipedia.org/wiki/Stallman>.

52. Shelanski & Shidak, *supra* note 32, at 11 (noting that in Schumpeterian markets "a firm's acquisition or possession of market power may be fleeting").

Courts continue to look at markets for technology products as simply a snapshot in time, where firms compete for a share of the sales of an existing solution. By doing so they fail to recognize the dramatic power that innovators have in these markets over the course of time.<sup>53</sup> As illustrated in previous examples, Schumpeterian revolutions can take place quickly, and paradigms can shift almost overnight.<sup>54</sup> While the law traditionally insists on identifying market competitors by their ability to act as effective substitutes,<sup>55</sup> it seems unrealistic not to acknowledge a factor that significantly influences technology firms' own competitive analyses: that nascent threats, though immediately impotent, may potentially develop into substitutes for their own products over the short run.<sup>56</sup>

#### **B. Institutional Roles: Congress has Charged the Courts with Implementing Standards**

The substantive prohibition on monopolization established in section two of the Sherman Act (enacted in 1890 and never amended) reads:

Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty . . . .<sup>57</sup>

This broadly crafted prohibition necessarily fails to address the myriad nuanced situations to which it was intended to and now applies.<sup>58</sup> In recognition of the vast and dynamic arena that makes up the American economy, Congress implicitly acknowledged their inability to implement a code that effectively addressed all behaviors that they intended to proscribe.<sup>59</sup> To that end, it charged the courts

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53. See Salop & Romaine, *supra* note 10, at 617.

54. Shelanski & Shidak, *supra* note 32, at 15 (describing the process as "a series of companies leapfrogging each other").

55. United States v. E.I. du Pont de Numours & Co. ("du Pont,"), 351 U.S. 377, 395 (1956).

56. See ROBERT, *supra* note 39.

57. 15 U.S.C. § 2 (2000).

58. See KINTNER, FEDERAL ANTITRUST LAW (Vol. I 1980) (noting that the history of the act shows that Congress intended the broad language of the act to provide the courts with leeway to address the wide variety of anticompetitive conduct with which they might be presented with).

59. See Standard Oil Co. v. United States, 221 U.S. 1, 61 (1911) (announcing the rule of reason standard applicable to violations of section 1 of the Sherman act, and noting that that by "not specifying, but indubitably contemplating and requiring a standard, it follows that it was intended that the standard of reason which had been applied at the common law and in this country in dealing with subjects of the character embraced by the statute,

with developing judicial standards by which to implement the fundamental goals of the antitrust laws.<sup>60</sup> The Supreme Court recently reiterated its commitment to developing the common law of Sherman Act jurisprudence, stating that “[f]rom the beginning the Court has treated the Sherman Act as a common-law statute.”<sup>61</sup> “Just as the common law adapts to modern understanding and greater experience,” the Court noted, “so too does the Sherman Act’s prohibition on ‘restraints of trade’ evolve to meet the dynamics of present economic conditions.”<sup>62</sup> Seen in that light, the court’s refusal to consider a body of doctrine applicable to a new paradigm of economics and competition on institutional roles grounds is no more than a failure to act in accordance with the very authority it claimed authorized inaction.<sup>63</sup>

### C. Network Effects: The Public Benefits from Certain Kinds of Monopolies

One of the primary concepts underlying a discussion of the difference between many old economy products and a wide variety of new economy markets is the notion of the “network effect.”<sup>64</sup> The network effect is a characteristic of a product by which its value to the consumer is defined or enhanced by virtue of other consumers adopting the same product.<sup>65</sup> The identifying characteristic of a product with network effects is its ability to connect one consumer, or “user,” to other users of the same product.<sup>66</sup> A classic example of the network effect is the telephone and accompanying infrastructure: but

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was intended to be the measure used for the purpose of determining whether, in a given case, a particular act had or had not brought about the wrong against which the statute provided”).

60. KINTNER, *supra* note 58 at 165, 239. In arguing that Congress “intended to provide only the general guiding principle for competitive activity and to leave for the courts the often difficult task of determining the legality of particular conduct on a case-by-case basis,” the author quotes Senator Sherman’s floor speech in which the bill’s sponsor stated that “it is difficult to define in legal language the precise line between lawful and unlawful . . . [It] must be left to the courts to determine in each particular case.”

61. *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 127 S.Ct. 2705, 2720 (2007).

62. *Id.*

63. David McGowan, *Innovation, Uncertainty, and Stability in Antitrust Law*, 16 BERKELEY TECH. L. J. 729, 729 (2001) (claiming that the history of the Sherman Act “suggests that Congress failed to resolve conflicts among economic interests affected by the antitrust laws, leaving such a resolution to the courts”).

64. *See* Salop & Romaine, *supra* note 10.

65. *Id.* at 620 (citing Carl Shapiro, Hal R. Varian, *Information Rules* 13 (Harvard Business School Press 1998)).

66. *Id.*

for the ability to call other users who also purchased telephones and paid for access to the telephone system (the network), any individual user's purchase of a telephone would be entirely useless.<sup>67</sup>

Consequently, the utility of products characterized by network effects increases exponentially with their rate or adoption.<sup>68</sup> Furthermore, competing and incompatible systems which implement the same type of network undermine the ability of any of the products to achieve their peak performance.<sup>69</sup> So long as the usership is divided amongst the competing platforms, no single user will achieve the benefit that would be possible to that user (and all users) were they all to adopt a single platform.<sup>70</sup> In such cases, the technology itself would be unlikely to penetrate and be adopted at all, given that the experience most users would have would be a less than compelling endorsement of the technology.<sup>71</sup> Hypothetically, simultaneous development of several incompatible phone systems in the early stages of telecommunications technology innovation could have stifled the creation of any single phone system. By extension, in an analogous scenario the Internet, which underlies a significant portion of economic activity today (from consumer retail activity, to international currency market synchronization, to business-to-business data integration), may never have developed if multiple competing frameworks for networked computing had developed, thereby fragmenting the market and isolating the usership of each.<sup>72</sup>

Once a unitary system has been deployed, the public is primed to take part in the evolution of that technology by building the network through using it, the so-called "network externality."<sup>73</sup> By allowing

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67. The phone would still "work" in the sense that the basic features of the technology would still function as expected. However, the only task a user would be able to accomplish would be to connect to the switchboard and talk to the operator. Without the addition of another user of the system to connect to, the phone has no real purpose, and without a wide variety of users to connect to, its utility is extremely limited. The true value of the phone as a technological *solution* is only realized by the expansion of the network itself.

68. See Salop & Romaine, *supra* note 10.

69. *Id.*

70. *Id.*

71. *Id.*

72. Interestingly, in that scenario, Microsoft would likely never have been in a position to find itself embroiled in this litigation matter. Microsoft's contributions to the technology landscape have undoubtedly brought immeasurable benefit to the consuming public, both directly and by way of patronizing other businesses whose products, services, and operations are enhanced by Microsoft's innovations.

73. Shelanski & Sidak, *supra* note 32, at 7-8 ("Network externalities are benefits to society that accrue as the size of a network grows.").

the public to utilize standardized products and services, a singular “network” is created.<sup>74</sup> When new network innovations prove superior to previous network solutions, an entire user base can upgrade over a short period of time, making the transition together. By allowing the unitary network to form in the first place, the integrity of the network itself is reinforced through the evolution of the platform upon which it is deployed.<sup>75</sup>

In such markets, the public derives a clear benefit from the establishment of unitary platforms and protocols, in the form of the network externality.<sup>76</sup> Some industries have successfully adopted standards organizations that take on the onerous task of synchronizing the efforts of multiple players in the field to ensure that interoperability is developed or maintained.<sup>77</sup> Such shared standards, however, are necessarily voluntary, and allow any individual firm to deviate from the established norms should they choose to do so.<sup>78</sup> In a pointed example, both the American National Standards Institute (ANSI) and the International Organization for Standardization (ISO) (two different independent standards organizations) have published specifications for SQL (the “structured query language” used to interact with data in a database).<sup>79</sup> Each individual database software product chooses to implement one standard or the other, and most include their own modifications, customizations, and extensions.<sup>80</sup> Furthermore, standards bodies are only likely to formalize standards where a proprietary solution does not already exist.<sup>81</sup> Finally, efforts to engage in standards setting amongst competing proprietary solutions providers could have antitrust implications in and of themselves.<sup>82</sup>

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74. *Id.*

75. *Id.* (calling this phenomenon “technological path dependence”).

76. *Id.* at 27 (noting that “[t]he consumer benefits from bundling and interoperability can be substantial”).

77. For example, the American National Standards Institute (ANSI) oversees the creation and promulgation of guidelines and consensus standards for a huge variety of business sectors. *See* About ANSI, Overview, [http://ansi.org/about\\_ansi/overview/overview.aspx](http://ansi.org/about_ansi/overview/overview.aspx).

78. *Id.*

79. *See* Wikipedia – SQL, <http://en.wikipedia.org/wiki/SQL> (last visited Aug. 23, 2007).

80. *Id.*

81. Shelanski & Sidak, *supra* note 32, at 87.

82. *Id.* at 88. (“A substantial body of law exists on the question of whether standard setting among horizontal competitors enhances efficiency and benefits consumer welfare or instead facilitates collusion or the exclusion of entrants.”).

In many cases (particularly when such platforms may be transitory, and replaced by a subsequent innovation) the more efficient solution is to let a single provider define its own protocol and garner usership based solely on the superiority of its technology.<sup>83</sup> While even duplicative and competing standards can benefit the public,<sup>84</sup> a single standard would be more efficient and effective in establishing interoperability. Since the ultimate aim of the antitrust laws is to benefit the consuming public, it would be remiss to ignore the fact that such market structures get better products to the public quickly and cheaply, and continue to do so over time.<sup>85</sup>

The *sine qua non* of such markets is investment in research and development.<sup>86</sup> Competitors in such markets do not generally concentrate on developing a product to compete with the current standard.<sup>87</sup> Instead, they are forward looking, and rely on innovation to develop a product or platform that can supplant the current market leader because of its superiority.<sup>88</sup> Immediately upon the launch of such a product (and in anticipation of its own rapid replacement by more new technology), the provider company must charge a premium to recoup its investment.<sup>89</sup> Such a price is not artificially high, but a

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83. In many cases in which industry standardization efforts have taken the place of “standardized” monopoly providers, competing standards have sprung up, leading to the acerbic axiom often used among technologists that “the great thing about standards is that there are so many to choose from.” See, e.g., Wayne Hodgins, *The Great Thing About Standards Is...*, Off Course-On Target (Oct. 21, 2006), [http://waynehodgins.typepad.com/ontarget/2006/10/the\\_great\\_thing.html](http://waynehodgins.typepad.com/ontarget/2006/10/the_great_thing.html)

84. *Id.* (arguing that having standards is better than having none, but that having more than a single standard leads to confusion).

85. See Shelanski & Sidak, *supra* note 32, at 10 (arguing for Professor Arrow’s admonishment that “a rule of penalizing market successes that are not the result of anticompetitive practices will, among other consequences, have the effect of taxing technological improvements and is unlikely to improve welfare in the long run.”) (citing Declaration of Kenneth J. Arrow, attached to Memorandum of the United States of America in Support of Motion to Enter Final Judgment and in Opposition to the Positions of I.D.E. Corporation and Amici, *United States v. Microsoft Corp.*, Civil Action No. 94-1564, 5-6 (D DC filed Jan. 18, 1995)).

86. Salop & Romaine, *supra* note 10, at 620, (pointing out that “markets subject to large network effects and incompatible products may tend towards oligopoly or monopoly”).

87. *Id.* at 622 (noting that “[m]onopoly power can be and often is achieved through a natural economic process of one firm exhibiting superior skill or luck to innovate faster or achieve lower costs than its competitors”).

88. *Id.* at 623 (discussing how exclusionary conduct has the potential to shift innovation by making it “more difficult for competitors to offer new and superior programs and technologies” with which to displace existing dominant technologies).

89. Shelanski & Shidak, *supra* note 32, at 5. (“Winners enjoy a period of dominance, during which they receive above-cost prices that include the returns necessary to induce

natural means of dividing fixed costs incrementally over unit sales. Furthermore, the monopoly platform provider is often unable to sustain such an inflated price.<sup>90</sup> If the platform lasts long enough, other players may be able to provide cheaper alternatives, eroding the now bloated price point. If instead another provider introduces a replacement technology, the cycle begins again.<sup>91</sup> When courts view “inflated” prices that recoup the investment in innovation as abuses of monopoly power, they ignore the reality of the economics of many markets.<sup>92</sup>

The accommodations suggested herein are not intended to discount the potential for abuse of monopoly power, even in innovative markets for networked products.<sup>93</sup> Allowances for the unique needs of fast paced, innovative markets for products with network effects may exacerbate their tendency to become oligopolistic, which in turn may increase the likelihood for abuse of entrenched positions.<sup>94</sup> A provider in the type of market described above may be tempted to turn its focus away from innovation and towards entrenchment.<sup>95</sup> This risk directly challenges the very public benefit derived from allowing firms to act to foster interoperability—ensuring public access to the enhanced network benefit from the most recent innovations in the market. In that case, behavior designed to prevent the entry of new innovations that could displace the current monopolist is exactly the type of conduct that the antitrust laws, should seek to curtail, through the application of the principles underlying these markets.<sup>96</sup> Section IV, *infra*, a proposal for enforcing the antitrust laws outlines in a way that addresses the unique benefits

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risky investment in product innovation, but are subject to being supplanted by rivals in a later innovation cycle.”).

90. *Id.* The “period” of dominance will be limited to the period over which a competitor could ramp up an effort to create a competing product and enter the market.

91. *Id.*

92. *Id.* (competitors in such markets “achieve market dominance, but dominance that is continually challenged and subject to displacement by subsequent innovations”).

93. Indeed, it is likely that that even under the suggested analysis, Microsoft would not have escaped liability, because their market power and conduct would both satisfy the elements analytical framework proposed herein.

94. Salop & Romaine, *supra* note 10, at 620.

95. *Id.* at 623.

96. (“By controlling compatibility and interoperability of rivals’ programs, and by implementing exclusive relationships that deny rivals’ access to certain technologies, it is more difficult for competitors to offer new and superior programs and technologies. Facing less innovation competition, a firm like Microsoft might be able to slow its own innovative efforts and channel innovations in a way that it controls, thereby entrenching its monopoly power in the future”).



and dangers present in new economy industries and markets characterized by network effects.

**D. The Times They Are A-Changin': Innovative Markets Are Not Protected Without Recognition of Their Unique Needs**

In essence, the *Microsoft III* decision neglected to address the fact that, practically speaking, courts applying traditional tests will not be able to accurately assess and remedy genuinely anti-competitive behavior in contemporary markets. This is because in innovative product markets, exclusionary behavior is only effective until the next innovation supplants the importance of the relevant product.<sup>97</sup> Furthermore, since the Clayton Act authorizes private parties to sue under the antitrust laws and recover treble damages plus attorneys' fees,<sup>98</sup> justice requires that the substantive prohibitions of the Act must closely track an analyses of real harms and benefits inside the markets to which they are applied.<sup>99</sup>

Market power is more easily maintained when there are significant barriers to entry.<sup>100</sup> Empirically, barriers are more likely to be found when a strong firm maintains a dominant share of a product market.<sup>101</sup> However, in markets characterized by competition for the field, the primary barrier to entry is capacity for innovation. Current market share, without more, is not a valid measure of innovative capacity. The barriers that prevent a firm from entering a market to compete directly with a current product are created by the network effects themselves.<sup>102</sup> If competition in a market is for the field, a dominant firm's raising of prices above a competitive level have no direct bearing on a competitive firm's ability to create new products that render the dominant firm's product obsolete. It is other market created barriers, however, that affect a competitor's ability to break into the market.<sup>103</sup> It is true that a dominant firm may capture a large percentage of sales in a product market, inhibiting direct competitors from generating revenues that underwrite research activities out of operating profits. Product revenue is not the only source of research

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97. See Schmalensee, *supra* note 16.

98. 15 U.S.C. § 15 (2000) (providing in pertinent part that "any person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws may sue therefor . . . and shall recover threefold the damages by him sustained, and the cost of suit, including a reasonable attorney's fee").

99. See Schmalensee, *supra* note 16.

100. Salop & Romaine, *supra* note 10, at 621.

101. *Id.*

102. *Id.* at 620.

103. *Id.* at 621.

funding, and non-competitors may also engage in innovations that ultimately disrupt existing product markets.

Present entrenchment, on the other hand, can provide benefits to consumers in the short term.<sup>104</sup> Such entrenchment should not be given the same weight as activities that tend to prevent competitive firms from innovating new solutions in the same industry. For example, behaviors such as filing overly broad patents, restrictive licensing agreements, product leverage, and strategic mergers and acquisitions, can be used to create barriers to entry and harness control of a market for innovation over time.<sup>105</sup> Such activity can take place parallel to, and independent of, competition in the present product market.<sup>106</sup> It can actively stifle sequential competition for the relevant field.<sup>107</sup> Without recognizing the economic principles underlying competition in these markets, courts are deprived of a specialized set of tools with which to accurately determine liability and craft appropriate remedies to redress truly anticompetitive behavior.<sup>108</sup>

#### **IV. Proposal: Implementing a New Framework for Analyzing Monopolization Charges in Innovative Product Markets**

##### **A. Defining the Relevant Innovative Product Market**

In *Microsoft III*, the court refused to recognize the Java platform and the Netscape internet browser as competitive products in the relevant product market because they were not yet capable of being substituted by consumers as an alternative for a computer operating system, such as Windows.<sup>109</sup> The first step toward solving this problem is for courts to acknowledge the rapid changes made in the technology market.<sup>110</sup> Court's need not "make up" potential entrants

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104. *Id.*

105. *Id.* at 622.

106. *Id.*

107. *Id.*

108. See Shelanski & Sidak, *supra* note 32, at 27 (arguing that a "remedy that prevents bundling because of its perceived effects on competitors would also eliminate its benefits for consumers").

109. *United States v. Microsoft Corp.*, 253 F.3d 34, 54 (D.C. Cir. 2001) (finding that "consumers could not now abandon their operating systems and switch to middleware in response to a sustained price for Windows above the competitive level").

110. In fact, the Internet (and internet browsers, by extension) has become a practical competitor as an application deployment platform. For example, webmail providers, such as Hotmail and Gmail, have overtaken desktop email clients, such as Microsoft Outlook or Lotus Notes, and the trend is expected to continue, at least for this fundamental

or be prescient as to the next innovation.<sup>111</sup> Rather, they can look at existing firms that have the potential to provide new alternatives to defendant's product, as well as firms known to be investing in developments in the industry (even if none are yet viable substitutes), and consider them as potential competitors for the field. In doing so courts can more accurately approximate the market structure as perceived by the players in that market, and thereby conform their legal analysis more closely to the actual operations of the markets.

This simple change in focus on what form the relevant competition takes informs a change in the analysis of who the competitors are. Courts can then avoid the morass of attempting to divine innovative possibilities where the technology innovators themselves have not yet realized those possibilities. Only identifiable potential need be considered, and innovation share can be evaluated based on an analysis of the competing firms' potential for growth and eventual Schumpeterian market transformation. By establishing that a firm has a dominant ability to provide innovative solutions in the field (or to prevent others from providing them), courts can determine a firm's market power in the innovative product market.

#### **B. Establishing Power in the Relevant Innovative Product Market**

Again, a court's recognition that the relevant market is the entire field, rather than a particular product, underlies the analysis of how market power is established. Rather than looking at a firm's ability to control price or output of a single product, the courts can look at the ability to control price or output of *innovation* in the field. While Microsoft's assertion that direct evidence of market power should be required may be misguided, it might be possible for the courts to create an appropriate surrogate for market power based on a firm's innovation potential. For example, courts could look at a firm's history of providing the innovative replacement for a previous product in a particular product or service space. If it can be shown that a particular company holds 80 percent or more of the innovations in a field, and is only rarely supplanted from its dominant position, substantial "innovation share" is shown, and market power could be inferred.

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personal computing activity. *See* THE RADICATI GROUP, INC., E-MAIL CLIENT MARKET, 2006-2010, (follow "Email Clients" link).

111. Indeed, the Court found that "Microsoft feared [Netscape and Java] because they were well positioned to serve as platforms for 'network-centric applications that run in association with Web pages.'" Shelanski & Sidak, *supra* note 32, at 66-67 (quoting *United States v. Microsoft Corp.*, 84 F. Supp. 2d 9, 58 (D.C. Cir. 1999)).

In situations in which this innovation share is not large enough, or definite enough to afford a presumption of market power, courts can look to direct evidence to do so, as they have always done. In the context of innovative markets, this type of control may be found in the form of disproportionate investment in research and development or marketing, influential positions in industry organizations or standards bodies, a history of acquisition of innovative technologies, or employment of a large share of an industry's leading research and development personnel. Indeed, contrary to Microsoft's assertion in *Microsoft III*, large market share could be a strong indicator of ability to control innovation through direct influence over a significant portion of the consumer base in a particular product space. Any of these elements could support a finding that the firm in question has significant power in the market to control the nature and pace of innovation without fear of being supplanted by another firm competing for the field.

### **C. Analyzing Monopolization Conduct of Influential Firms in Innovative Product Markets**

Because the antitrust laws are intended to protect competition and not competitors, when the competition in question is for the field only conduct that is directed at suppressing competition for the field should be considered by courts.<sup>112</sup> The court in *Microsoft III* effectively implemented this standard by holding that despite not being included in the relevant product market, Microsoft's conduct harmed Java and Netscape by inhibiting their ability to eventually become effective substitutes.<sup>113</sup> Considering conduct which effects firms excluded from the relevant product market analysis seems logically inconsistent (as Microsoft argued) unless one adopts the principle that competition is taking place for the field, rather than in it. While failing to name it as such, the rule the court announced implicitly adopted the view that behavior hampering Schumpeterian innovation in the field constituted monopolization conduct.

In evaluating conduct courts can look to the effect of the conduct on the landscape of innovation. In *Microsoft III*, the court focused on

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112. Since the early days of monopolization analysis, conduct creating or maintaining monopoly market share that could be characterized as "skill, foresight and industry" has been a considered "natural monopoly," which is legal, and exempt from liability. See *Alcoa*, 148 F.2d at 430.

113. *Microsoft III*, 253 F.3d at 54 (holding that "[n]othing in § 2 of the Sherman Act limits its prohibition to actions taken against threats that are already well-developed enough to serve as present substitutes").

exclusionary licensing agreements and leverage of the operating system in the browser market.<sup>114</sup> Under the proposed framework, those actions would be proscribed because of their effect on competitors' ability to parlay innovative potential into deployed solutions.

#### **D. Challenges to Meet, and Pitfalls to Avoid**

While making allowances for monopolists in innovative markets with network effects may provide a more fine tuned analysis and benefit consumers, a court must be sensitive to the challenges and pitfalls that it presents. Identifying the innovative product market participants and establishing market power may be extremely difficult when many of the players are not prominent under traditional analyses, which focus on market share. Further, there is potential for real entrenchment in innovative markets, and the proposed framework must be applied with caution to avoid simply becoming an exemption from the antitrust laws for these types of markets. The proposals made herein are not intended to give innovators carte blanche, but rather to provide a more sophisticated analysis of the effects of their behavior on the health of the market overall.

Even in a traditional market analysis, identifying the relevant product market is a complex task.<sup>115</sup> *Brown Shoe* provides what appears to be a simple example: defining the relative product market in a dispute among shoe retailers. The court nonetheless struggled with the question of whether shoes formed the appropriate market; whether men's, ladies, and children's shoes were each distinct markets; and whether luxury shoes were distinct from economy shoes.<sup>116</sup> In a more complicated case, the Supreme Court dealt with inter-industry competition, applying complex economic principles to determine that glass container manufacturers were in active competition with metal can manufacturers.<sup>117</sup>

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114. See *Microsoft III*, 253 F.3d at 34.

115. See *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962) (holding that the "outer boundaries of a product market are determined by the reasonable interchangeability of use or the cross-elasticity of demand between the product itself and substitutes for it").

116. *Id.* at 326 (holding that the further segmentation of the shoe market along "price/quality" and "age/sex" lines would be unrealistic).

117. *United States v. Cont'l Can Co.*, 378 U.S. 441, 453 (1964) (pointing out that "[i]nterchangeability of use and cross-elasticity of demand are not to be used to obscure competition but to 'recognize competition where, in fact, competition exists'" (quoting *Brown Shoe*, 370 U.S. at 326)).

Similarly, identifying competitors in innovative markets may be complicated and challenging. In determining what the potential alternatives are, a court will need to engage in the same type of cross-elasticity of demand analysis, only concentrating on products that are not yet fully realized. In establishing market power, a court will need to evaluate the condition of each competitive landscape it encounters, as it did prior to allowing an inference of market power from market share.<sup>118</sup>

Of greater concern is the risk that truly entrenched monopolists would be able to evade liability for actions that in fact harm the competitive landscape, thereby harming consumers. A large, entrenched market leader can “set the standard” despite the availability of other, superior standards.<sup>119</sup> It is a justifiable concern that the proposed analysis has the potential to leave monopolists in a present product market in place, “locking in” their future position.<sup>120</sup> In innovative markets, failure to detect and enjoin lock in conduct early may irreparably harm the market, and its customers.<sup>121</sup>

As a threshold matter, it is important to acknowledge that not all entrenchment leads to lock in, particularly when switching from one system to another is cheap or easy.<sup>122</sup> Further, certain tactics in fast moving markets that would be identified as anticompetitive elsewhere may be appropriate, as in the case of aggressive pricing, where early market penetration may be key to having any commercial viability at all.<sup>123</sup>

The solution should focus the analysis of anticompetitive conduct on that which creates long term entrenchment, adversely affecting the ability of other firms to innovate and supplant the entrenched firm. For example, in *Microsoft III*, the proposed framework could establish that Microsoft’s bundling of Internet Explorer with Windows for free represented a concerted effort to prevent middleware products from achieving their innovative potential.<sup>124</sup> After all, having defined the market as the landscape of innovation, it is threats to the market’s innovative capacity itself that should be

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118. *United States v. Grinnell Corp.*, 384 U.S. 563, 571 (1966).

119. Shelanski & Shidak, *supra* note 32, at 9.

120. *Id.*

121. *Id.* at 10.

122. *Id.* at 9.

123. *Id.* at 10.

124. *Id.* at 71 (arguing that “Microsoft mounted a deliberate assault upon entrepreneurial efforts that, left to rise or fall on their own merits, could well have enabled the introduction of competition into the market”).

enjoined. It may be a difficult process, as are many facets of antitrust law, but in the end it will provide the greatest potential for serving the needs of end consumers.

## V. Conclusion

Antitrust law seeks to protect competition, rather than competitors, for the purpose of providing the consuming public with the best products at the lowest prices.<sup>125</sup> Certain types of markets function in fundamentally different ways than others, necessitating that it takes a different approach to regulating them so as to provide the greatest benefit to consumers.<sup>126</sup> Product markets characterized by rapid innovation and network effects provide the greatest benefit to consumers when that innovation is fostered, and when those network effects are protected.<sup>127</sup> In innovative markets, courts should recognize that the goal of the antitrust laws will be achieved when competition for the field, rather than competition in a particular, specific product market is protected. In applying old economy antitrust principles to these markets, the law becomes a mechanism for protecting competitors, rather than protecting consumers through regulating the healthy function of the market itself.<sup>128</sup>

The beneficiaries under the existing framework are firms who seek only to provide an alternative source for a product already on the market, rather than contributing their own ideas to the market. This approach may have a chilling effect on innovation in these fields. Fewer firms will feel the incentive to innovate themselves and would wait for another firm to innovate, then free ride on the innovator by developing a competing product.<sup>129</sup> Further, to protect these providers of alternatives is to chip away at the powerful network effects by siphoning off a portion of the public to a secondary provider, rather than encouraging them to stick together through the Schumpeterian cycles of product development that naturally take place through time.

By changing the focus, the courts can provide more meaningful protection for consumers by protecting competition through

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125. See KINTNER, *supra* note 58, at 239.

126. See Schmalensee, *supra* note 16.

127. *Id.*

128. *Id.*

129. Cf. *Cont'l T.V., Inc. v. GTE Sylvania*, 433 U.S. 36, 55 (1977) (recognizing that manufacturer restrictions on "intrabrand" competition serve the competitive purpose of creating incentive for "quality retailers" to make the investments in marketing, etc., that are required for the manufacturer's product to effectively compete at the retail level with other brands).

innovation. This model would provide incentive to make better products, to continue to drive the state of the art, and to provide solutions that bring consumers closer together, rather than further apart. Congress has relied on the courts for over a hundred years to create standards for enforcement of the antitrust laws, and to decline to consider a new approach to competitive analysis in the face of a sea change in competition is a travesty that leaves innovative industries worse off.

To implement such a standard, courts should adopt a sensitivity for the special needs of innovative markets for networked products in three ways. In the market definition phase, courts should not exclude potential alternatives and nascent competitors in order to best understand the true field of competition. In discerning market power, they should take into account a firm's share of the innovation in the field, as well as aspects of its ability to control such innovation in the future. Finally, when analyzing monopolization conduct, courts should pay close attention to activities where a firm's intent or effect is to inhibit innovation by others, or to secure ultimate control over the pace, source, and expression of such innovations. Courts engaging in monopolization analysis in new economy industries had better start swimming, or they—along with the consuming public and the firms whose antitrust challenges they attempt to resolve—may just sink like stones, for the times they are a-changin'.<sup>130</sup>

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130. See BOB DYLAN, *THE TIMES THEY ARE A-CHANGIN'* (Columbia Records 1964).



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